UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA, CHARLESTON DIVISION

NORTHWEST REGIONAL AIRPORT AUTHORITY,

Plaintiff,

v.

3M CO.;
AGC CHEMICALS AMERICAS, INC.;
ARCHROMA U.S., INC.;
ARKEMA, INC.;
BASF CORP.;
BUCKEYE FIRE EQUIPMENT CO.;
CARRIER FIRE & SECURITY AMERICAS LLC, formerly known as CARRIER FIRE & SECURITY AMERICAS CORPORATION;
CARRIER GLOBAL CORPORATION, formerly known as CARRIER SOLUTIONS CORPORATION;
CHEMDESIGN PRODUCTS, INC.;
CHEMGUARD, INC.;
CHEMICALS INCORPORATED;
CLARIANT CORP.;
CORTEVA, INC.;
DEEPWATER CHEMICALS, INC.;
DUPONT DE NEMOURS, INC.;
DYNAX CORP.;
EIDP, INC., formerly known as E. I. DU PONT DE NEMOURS AND COMPANY;
NATION FORD CHEMICAL CO.;
RTX CORPORATION, formerly known as RAYTHEON TECHNOLOGIES CORPORATION;
THE CHEMOURS CO. FC, LLC;
THE CHEMOURS CO.; and
TYCO FIRE PRODUCTS LP,

Defendants.

MDL NO.: 2873

Master Docket No.: 2:18-mn-2873-RMG

JUDGE RICHARD GERGEL

Civil Case No.:

DIRECT FILED COMPLAINT AND JURY DEMAND PURSUANT TO CASE MANAGEMENT ORDER NO. 3

COMPLAINT

Plaintiff Northwest Regional Airport Authority ("NRAA" or "Authority"), by and through its undersigned counsel, brings this action against Defendants 3M Co., Buckeye Fire Equipment Co., Chemguard, Inc., Tyco Fire Products LP, AGC Chemicals Americas, Inc., Archroma U.S., Inc., Arkema, Inc., BASF Corp., Chemdesign Products, Inc., Chemicals Incorporated, The Chemours Co., The Chemours Co. FC, LLC, Clariant Corp., Corteva, Inc., DuPont de Nemours, Inc., EIDP, Inc., *formerly known as* E. I. du Pont de Nemours and Company, Deepwater Chemicals, Inc., Dynax Corp., Carrier Fire & Security Americas LLC, *formerly known as* Carrier Fire & Security Americas Corporation, RTX Corporation, *formerly known as* Raytheon Technologies Corporation, Carrier Global Corporation, *formerly known as* Carrier Solutions Corporation, and Nation Ford Chemical Co. (collectively, "Defendants"), and alleges as follows:

I. NATURE OF THE ACTION

1. Certain per- and polyfluoroalkyl substances ("PFAS") can pose human health risks, such as cancer, liver, thyroid, and kidney disease, immune system disruption, and pregnancy-induced hypertension, among other adverse effects, depending upon one's level of exposure. PFAS also present environmental threats. PFAS associated with the manufacturing, marketing, and sales of aqueous film-forming foam ("AFFF") products purchased by the Authority to help ensure safety to the traveling public have contaminated the Authority's groundwater, stormwater, and soils and; other Authority properties and systems. As used in this Complaint, the term PFAS includes those chemicals themselves (including all of their salts, ionic states and acid forms of the molecules) and the "precursor" chemicals that break down into these PFAS. Due to their uniquely strong chemical bonds, PFAS chemicals resist environmental degradation and persist for many years once released into waters, soils, and other exposure pathways. They are often referred to as

"forever chemicals" because they do not readily break down in the environment. When released into the environment, they can be ingested by animals (and humans) and stored in tissues and organs. In this way, PFAS can bioaccumulate up the food chain and pose increased risks to predators and animals at the top of the food chain, including humans. Their physical and chemical properties make PFAS uniquely challenging, and costly, to mitigate, eliminate, reduce, or control in the environment. PFAS contamination of the Authority's groundwater, stormwater, and soils; and other Authority properties and systems, that has occurred at specific locations and at different times, represents a complex, management and mitigation challenge to NRAA and will continue to do so for many years.

2. Leelanau and Grand Traverse Counties established the Authority as a public body corporate, in 2020, pursuant to the Michigan Regional Airport Authorities Act. Mich. Comp. Laws Ann. § 259.137.

3. Since 2021, the Authority has owned and operated the Cherry Capital Airport ("Airport"), a Federal Aviation Administration ("FAA") Part 139 certificated airport. 14 CFR Part 139.

4. The Airport is located at 727 Fly Don't Drive, Traverse City, Michigan. The Airport is situated on an approximately 1180-acre plot, and is bounded just across South Airport Road to the south, across Three Mile Road to the east, across Garfield Road to the west, and Parsons Road to the north. The site consists of the main commercial terminal area, the West T-Hangar area, the General Aviation area (North T-hangar, North, GA, and South ramps), as well as the Judson Street non-aeronautical development area. The U.S. Coast Guard Air Station Traverse City ("Coast Guard Air Station") is contiguous to Airport property on its northern boundary.

5. Prior to transfer of ownership to the Authority, the Airport was owned and operated by related municipal entities. From the late 1930's to 1972, the City of Traverse City owned and operated the Airport. (The Airport was leased by the United States of America from 1943 through 1949 for WWII purposes.) From approximately 1972 to 1990 the Airport was operated by the Northwestern Regional Airport Commission ("NRAC"), which was formed by an agreement between the City of Traverse City, Grand Traverse County, and Leelanau County. The City of Traverse City continued to own the Airport until 1990 when it transferred the Airport property to Grand Traverse County and Leelanau County. The City of Traverse City at that time withdrew from the agreement creating the NRAC. The NRAC continued to operate the Airport until October 1, 2021, when ownership and operation of the Airport was transferred to the Authority.

6. For ease of reference herein, this Complaint refers to the owner and operator of the Airport simply as the "Authority," regardless of which municipal entity owned the Airport at the time of the events described.

7. The Authority has investigated PFAS contamination at specific locations and at different times in the Airport's groundwater, soils, stormwater and other Airport properties and systems under its ownership or management, and continues to conduct monitoring and analysis at specific locations to remedy and protect such resources and to preserve the public health including pursuant to per state and federal rules and guidelines.

8. The Authority has collaborated with the Michigan Department of Environment, Great Lakes, and Energy ("EGLE") to investigate AFFF use at the Airport.

9. The Authority has installed numerous monitoring wells and conducted PFAS groundwater testing at specific locations and times at the Airport. The Authority has also tested

its soils and stormwater for PFAS at specific locations and times. PFAS, including PFOS and PFOA, have been found at specific locations and times in groundwater, soils, and stormwater tested at the Airport.

10. PFAS groundwater sampling at properties near the Airport at specific locations and times has revealed that PFAS contamination including at significant levels.

11. The Authority continues to monitor PFOS, PFOA, and other PFAS chemicals at specific locations in its groundwater, stormwater, and soils.

12. PFOS, PFOA, and other PFAS chemicals are all humanmade industrial chemicals that research indicates can be toxic to human and animal health, extremely persistent in the environment, soluble in water and fatty tissue, bioaccumulative, and difficult and expensive to remediate or remove from natural resources, soils, water supplies, and other environmental media. PFAS contamination of the Authority's property at specific locations poses a public health threat that has and will result in significant costs, losses, and damages to the Authority.

13. Defendants designed, manufactured, marketed, promoted, distributed, supplied, and/or sold PFAS-based AFFF products, and certain chemical ingredients incorporated into those products, that were used and released in and near the Airport at specific locations and different times including as a result of actions required by the FAA and which have caused and are continuing to cause an environmental and public health threat. Defendants' PFAS-based AFFF has caused contamination at different times and at specific locations to the Authority's groundwater, stormwater, and soils and; other Authority properties and systems.

14. AFFFs are specialized firefighting foam products that are intended to be mixed with water and applied to certain liquid-based fires. AFFF products have been purchased and stored at the Airport for decades. AFFF has been discharged in semi-annual testing of equipment, when

requested during FAA annual inspections, occasionally leaked or spilled during normal and foreseeable use during firefighting training exercises at the Airport, and may have been discharged in responding to difficult landings, actual fires, and other emergencies in order to protect the traveling public.

15. In addition, upon information and belief, AFFF has been used at specific times at the Coast Guard Air Station located to the north of the Airport on its adjoining property.

16. The intended and ordinary use of AFFF products involves spraying them into the air and onto the ground, whether in training exercises or in responding to difficult landings and fire events. Until 2019, the FAA required fire equipment calibration by spraying foam through a measuring device onto the ground to ensure proper mixing of AFFF and water from each piece of firefighting equipment. Environmental contamination is the inevitable result of this intended and ordinary use. Specific precautionary measures can guard against the uncontrolled release of PFAS during training exercises and can mitigate releases when responding to difficult landings and fire events.

17. Defendants knew that these dangerous chemicals would be released into the environment during the ordinary and intended use of their AFFF products, causing harm to groundwater underlying the Airport, its soils, stormwater and other Authority properties, among other damage to resources.

18. Defendants could have warned and instructed the users of their AFFF products regarding precautionary measures to be taken to prevent or minimize environmental contamination, such as advising that the products must not be used without an effective liner or catch basin or water filtration systems capable of removing PFAS including during training or testing exercises.

19. Similarly, Defendants could have warned and instructed regulators and the public about the potential hazards of the ordinary and intended use of their AFFF products, and the need to take steps to prevent extensive environmental contamination as a result thereof. Instead, Defendants concealed their knowledge of such hazards, and actively promoted their AFFF products as safe in order to protect their profits.

20. In addition to providing adequate warnings or instructions, Defendants could have elected to make different product design decisions in the formulation of their AFFF products. For example, Defendants could have utilized PFAS compounds that are less toxic and less bioaccumulative than PFOA and PFOS, and could have utilized entirely non-fluorinated alternative formulations during relevant time periods.

21. Indeed, once regulators began to scrutinize PFOA and PFOS, Defendants began to revise their product formulations to reduce or remove PFOA and PFOS, replacing them with different PFAS compounds that Defendants claimed are less toxic, less persistent, and less bioaccumulative than PFOA and PFOS. Defendants could have made these changes much earlier than they did.

22. Fluorine-free alternatives to Defendants' AFFF products are available. Certain manufacturers, such as National Foam, now market AFFF products that they maintain are fluorine-free. And certain Defendants, like 3M, began conducting research on such non-fluorinated alternatives decades ago, but terminated these efforts because, in part, the resulting products would not be as profitable.

23. While Defendants reaped profits from the production and sale of PFAS-based AFFF products, they saddled the Authority with the burden of cleaning up the mess inevitably caused by the ordinary and intended use of those products.

24. Because Defendants concealed the truth about the human health and environmental impacts of their AFFF products and the PFAS chemistries on which those products are based, and otherwise failed to carry out their duties to prevent harm to the Authority, the Authority did not know of the actual or potential contamination of its resources and properties with PFAS compounds resulting from the ordinary and intended use and disposal of Defendants' AFFF products.

25. The Authority is entitled to recover compensatory and consequential damages; past, current, and future costs or losses relating to AFFF-related PFAS contamination at specific locations and times of the Airport's soils, pavements, groundwater, stormwater, equipment, and other properties and resources owned and or managed by the Authority; injunctive relief requiring Defendants to abate injured or impaired Authority resources and properties; and all other relief available under law.

26. This action addresses only PFAS-related injuries attributable to the Defendants as a result of the design, manufacture, marketing, promotion, distribution, supply, sale, use, and/or disposal of AFFF products and AFFF component products. The Authority is not seeking to recover from these defendants through this complaint any relief for contamination and injury from PFAS that is not related to the manufacture and use of AFFF.

II. PARTIES

27. The Authority is a public body corporate, duly organized and existing by virtue of the laws of the State of Michigan.

28. The Authority has the power to sue for redress of damage to its resources and properties, and the duty to prevent damage, and to preserve, promote and foster the development and use of its resources and properties, for the public good.

29. The Authority will continue monitoring, assessing, investigating, and otherwise responding to PFAS contamination of the Airport, its soils, stormwater, pavements, the groundwater underlying it, and its other properties and resources.

30. Defendant 3M Company ("3M") is a Delaware corporation with its principal place of business in St. Paul, Minnesota. 3M designed, manufactured, marketed, sold, and/or distributed AFFF products containing or breaking down into PFAS, including PFOS, PFOA, and/or PFHxS. On information and belief, these 3M products were used and discharged into the environment in and around the Airport.

31. Defendant Buckeye Fire Equipment Co. ("Buckeye") is an Ohio corporation with its principal place of business in Mountain, North Carolina. Buckeye designed, manufactured, marketed, sold, and/or distributed AFFF products containing or breaking down into PFAS. On information and belief, these AFFF products were used and released into the environment in and around the Airport.

32. Defendant Chemguard, Inc. ("Chemguard") is a Texas corporation with its principal place of business in Marinette, Wisconsin. Chemguard designed, manufactured, marketed, sold, and/or distributed AFFF products containing or breaking down into PFAS. Upon information and belief, these Chemguard products were used and discharged into the environment in and around the Airport.

33. Defendant Tyco Fire Products LP ("Tyco") is a Delaware limited partnership with its principal place of business in Lansdale, Pennsylvania. Tyco is the parent corporation to Chemguard and successor-in-interest to Ansul Inc. ("Ansul"). Tyco designed, manufactured, marketed, sold, and/or distributed AFFF products containing or breaking down into PFAS. Upon information and belief, these Tyco products were used and discharged into the environment in and

around the Airport.

34. Defendant AGC Chemicals Americas, Inc. ("AGC") is a Delaware corporation with its principal place of business in Exton, Pennsylvania. On information and belief, AGC's fluorosurfactants were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

35. Defendant Archroma U.S., Inc. ("Archroma") is a Delaware corporation with its principal place of business in Charlotte, North Carolina. On information and belief, Archroma's fluorosurfactants were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

36. Defendant Arkema, Inc. ("Arkema") is a Pennsylvania corporation with its principal place of business in King of Prussia, Pennsylvania. On information and belief, Arkema was formerly known as Atochem, Inc. and/or is the successor-in-interest to Atochem, Inc. On information and belief, fluorosurfactants manufactured by Arkema and/or Atochem, Inc. were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

37. Defendant BASF Corp. ("BASF") is a Delaware corporation with its principal place of business in Florham Park, New Jersey. BASF is a successor-in-interest to Ciba-Geigy Corp. Upon information and belief, fluorosurfactants manufactured by BASF and/or Ciba-Geigy Corporation or Ciba Specialty Chemicals, including those trademarked Lodyne™, were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

38. Defendant ChemDesign Products, Inc. ("ChemDesign") is a Delaware corporation with its principal place of business in Marinette, Wisconsin. Upon information and belief, fluorosurfactants manufactured by ChemDesign were used to manufacture AFFF that was used

and discharged into the environment in and around the Airport.

39. Defendant Chemicals Incorporation ("Chem Inc.") is a Texas corporation with its principal place of business in Baytown, Texas. On information and belief, fluorosurfactants manufactured by Chem Inc. were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

40. Defendant The Chemours Co. is a Delaware corporation with its principal place of business in Wilmington, Delaware. Chemours Co. was previously a subsidiary of Old DuPont (as defined below) and was spun out of Old DuPont into an independent, publicly traded company on July 1, 2015.

41. Defendant The Chemours Co. FC, LLC is a Delaware LLC with its principal place of business in Wilmington, Delaware. Chemours Co. FC, LLC is a wholly-owned subsidiary of Chemours Co.

42. Defendants The Chemours Co. and The Chemours Co. FC, LLC are jointly referred to herein as "Chemours." Chemours designed, manufactured, marketed, sold, and/or distributed fluorosurfactants containing or breaking down into PFAS for use in the manufacture of AFFF. On information and belief, Chemours's fluorosurfactants, including those trademarked Capstone™, were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

43. Defendant Clariant Corp. ("Clariant") is a New York corporation with its principal place of business in Charlotte, North Carolina. On information and belief, Clariant's fluorosurfactants were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

44. Defendant Corteva, Inc. is a Delaware corporation with its principal place of

business in Wilmington, Delaware.

45. Defendant DuPont de Nemours, Inc. ("New DuPont") is a Delaware corporation with its principal place of business in Wilmington, Delaware.

46. Defendant EIDP, Inc. (formerly known as E. I. du Pont de Nemours and Company) ("Old DuPont") is a Delaware corporation with its headquarters and principal place of business in Wilmington, Delaware.

47. New DuPont, Old DuPont, Chemours, and Corteva, Inc. are referred to collectively as "DuPont." For decades, DuPont manufactured products containing PFAS, including PFOA, which DuPont obtained from 3M. In the early 2000s, after 3M had ceased the manufacture of PFOS and PFOA, DuPont itself began to manufacture PFOA. DuPont designed, manufactured, marketed, sold, and/or distributed fluorosurfactants containing or breaking down into PFAS for use in the manufacture of AFFF. On information and belief, DuPont's fluorosurfactants, including those trademarked Capstone™, were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

48. Defendant Deepwater Chemicals, Inc. ("Deepwater") is a Delaware corporation with its principal place of business in Woodward, Oklahoma. On information and belief, fluorosurfactants manufactured by Deepwater were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

49. Defendant Dynax Corp. ("Dynax") is a Delaware corporation with its principal place of business in Elmsford, New York. On information and belief, Dynax's fluorosurfactants were used to manufacture AFFF that was used and discharged into the environment in and around the Airport.

50. Defendant Carrier Fire & Security Americas LLC (formerly known as Carrier Fire

& Security Americas Corporation) ("Carrier Fire") is a limited liability company organized under the laws of Delaware, with its principal place of business in Palm Beach Gardens, Florida. Carrier Fire is the indirect parent of Kidde-Fenwal, Inc. ("KFI"). Carrier Fire is a successor to UTC Fire & Security Americas Corporation, Inc. Carrier Fire, including through its contractual assumption of liabilities and its own independent conduct, designed, manufactured, marketed, sold, and/or distributed AFFF products containing or breaking down into PFAS, including AFFF products under the brands "Chubb," "Kidde," "Lenel," and other brand names. On information and belief, Carrier Fire's AFFF products were used and discharged into the environment in and around the Airport.

51. Defendant RTX Corporation (formerly known as Raytheon Technologies Corporation) ("RTX"), is a corporation organized under the laws of Delaware with its principal place of business in Arlington, Virginia. In April 2020, United Technologies Corporation ("UTC") merged with Raytheon Technologies Corporation, and thereafter the merged corporation was renamed RTX. At the time of the merger, UTC held AFFF liabilities due to UTC's design, manufacture, marketing, distribution and sale of PFAS-containing AFFF products, and also as the parent company of Kidde Fenwal, Inc. ("KFI"), National Foam, Inc., and Kidde PLC. In turn, KFI, National Foam, Inc., and Kidde PLC, held AFFF liabilities as follows: In 2000, Williams plc demerged into Chubb plc and Kidde PLC. KFI was a subsidiary of Kidde PLC at the time of the demerger, and KFI's AFFF business became part of the newly formed Kidde PLC. National Foam, Inc. was a subsidiary of Kidde PLC at the time of the demerger, and National Foam, Inc.'s AFFF business became part of the newly formed Kidde PLC. Kidde plc contractually acquired the assets of and contractually assumed the debts and liabilities of KFI, National Foam, Inc., and more generally the Kidde PLC group of companies that it acquired. In July 2003, UTC acquired Chubb

PLC, which became a business unit of UTC that focused on security and fire protection products and services. UTC contractually acquired the assets of Chubb PLC and contractually assumed the debts and liabilities of Chubb PLC. In 2005, UTC contractually acquired Kidde PLC's assets and contractually assumed Kidde plc's debts and liabilities, including AFFF liabilities. At the time of this transaction, Kidde PLC owned KFI and National Foam, Inc.'s AFFF businesses. Thus, as part of this transaction, UTC contractually assumed National Foam, Inc.'s assets, contractually assumed National Foam, Inc.'s debts and liabilities including AFFF liabilities, and contractually assumed KFI's assets and contractually assumed KFI's debts and liabilities, including AFFF liabilities. UTC is liable for the AFFF liabilities of KFI and National Foam, Inc. including but not limited through contractual assumption of liabilities and principles of successor liability. UTC was the ultimate parent of KFI from 2005-2020. RTX, in turn, is a successor to UTC and the AFFF liabilities held by UTC from UTC's design, manufacture, marketing, distribution and sale of AFFF products, and also as the parent company of KFI, National Foam, Inc., and Kidde PLC. RTX, including through its contractual assumption of liabilities and its own independent conduct, has designed, manufactured, marketed, distributed, and/or sold PFAS-containing AFFF throughout the United States. On information and belief, these RTX products were used and discharged into the environment in and around the Airport.

52. Defendant Carrier Global Corporation (formerly known as Carrier Solutions Corporation) ("Carrier Global"), is a corporation organized under the laws of Delaware with its principal place of business in Palm Beach Gardens, Florida. In connection with the Raytheon Technologies Corporation and UTC merger into RTX in April 2020, UTC spun-off one of its reportable segments into Carrier Global, a separate, publicly traded company. Pursuant to the 2020 Separation and Distribution Agreement by and among UTC, Carrier Global, and a third entity

(Otis Worldwide Corporation), Carrier Global contractually assumed certain liabilities held by UTC, including those related to the AFFF businesses operated by KFI, National Foam, Inc., and Kidde PLC. Carrier Global, through its contractual assumption of liabilities, and its own independent conduct, has designed, manufactured, marketed, distributed, and/or sold PFAS-containing AFFF throughout the United States, including products sold under the brand names "Chubb," "Kidde," and "Lenel." On information and belief, these Carrier Global products were used and discharged into the environment in and around the Airport.

53. Defendant Nation Ford Chemical Co. ("Nation Ford") is a corporation organized and existing under the laws of South Carolina, with its principal place of business located in Fort Mill, South Carolina. On information and belief, Nation Ford supplied fluorochemicals containing PFOA, and/or PFAS chemical precursors for use in manufacturing the fluorosurfactants used in AFFF products that were used and discharged into the environment in and around the Airport.

III. JURISDICTION AND VENUE

54. This Court has jurisdiction pursuant to 28 U.S.C. § 1332 because complete diversity exists between Plaintiff and Defendants, and the amount in controversy exceeds the minimal jurisdictional limits of this Court. The Plaintiff is located in Michigan, but no Defendant is a citizen of Michigan.

55. The District Court has personal jurisdiction over Defendants in this action because Defendants have, among other things, conducted business in Michigan and caused tortious injury in Michigan.

56. The properties and natural resources that are the subject of this suit all rest within the Airport or are under Authority ownership, control or management.

57. Venue is appropriate in this judicial district pursuant to this Court's Case Management Order No. 3 ("CMO 3").

58. Plaintiff states that but for CMO 3 permitting direct filing in the United States District Court for the District of South Carolina, Plaintiff would have filed this Complaint in the United States District Court for the Western District of Michigan, Southern Division.

59. Further, in accordance with CMO 3, Plaintiff hereby designates the United States District Court for the Western District of Michigan, Southern Division, as the "Home Venue" as this case may have originally been filed there.

60. Venue is proper in the United States District Court for the Western District of Michigan, Southern Division, pursuant to 28 U.S.C. § 1391 because it is the judicial district in which Plaintiff is a resident and citizen, all of the property that is the subject of this action is situated in this judicial district, and a substantial part of the events or omissions giving rise to this action occurred in this judicial district.

IV. FACTUAL ALLEGATIONS

A. PFAS ARE CHEMICALS THAT THREATEN HUMAN AND ENVIRONMENTAL HEALTH AND SAFETY

61. Per- and polyfluoroalkyl substances (PFAS, as defined above) are a group of synthetic chemicals containing fluorine and carbon. They are known as "surfactants" in that they reduce the surface tension of water.

62. PFAS are human-made; they do not occur naturally.

63. The two most widely studied types of PFAS are PFOA and PFOS, both synthetic, fully fluorinated organic acids with eight carbon atoms.

64. Although PFOS and PFOA are the most widely studied types of PFAS, the PFAS family includes thousands of chemicals. Defendants have incorporated different PFAS chemicals

in their AFFF product formulations, including PFOA, PFOS, and PFHxS, among others.

65. PFAS chemicals are mobile and persistent. They readily spread into the natural environment upon release, where they break down very slowly, if at all.

66. The chemicals are characterized by multiple carbon-fluorine bonds, which are exceptionally strong and stable. As such, they are persistent in the environment and resistant to metabolic and environmental degradation.

67. PFAS compounds easily dissolve in water and are thus mobile and readily spread in the environment. They contaminate soils and leach from the soil into groundwater, where they can travel underground.

68. PFAS chemicals bioaccumulate and biomagnify in the environment. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than that at which the substance is lost by catabolism and excretion. Biomagnification is the increasing concentration of a substance in the tissues of organisms at successively higher levels in a food chain.

69. PFAS chemicals are extremely stable and persistent and as such, once ingested, tend to bioaccumulate in individual organisms for a significant period of time.

70. For example, PFOS and PFHxS, among other PFAS, have been shown to accumulate to levels of concern in fish, reaching concentrations of several thousands of times higher than in surrounding water.

71. PFOA, PFOS, and PFHxS, among other PFAS, have also been shown to bioaccumulate in humans.

72. PFAS chemicals further bioaccumulate in developing fetuses and in infants by crossing the placenta from mother to fetus and by passing to infants through breast milk.

73. PFAS chemicals biomagnify up the food chain—for example, when humans eat

fish that have ingested the substances. PFOS has been observed in high concentrations in various animals higher up in the food chain, including bald eagles, walrus, narwhals, and beluga whales.

74. Finally, and critically, PFAS chemicals are toxic. Numerous studies demonstrate that exposure to or ingestion of these chemicals can pose serious risks to humans and to animals.

75. Human epidemiological studies, relied upon by the EPA for purposes of the agency's health advisories on PFOA, have found associations between PFOA exposure and high cholesterol, increased liver enzymes, decreased vaccination response, thyroid disorders, pregnancy-induced hypertension and preeclampsia, and/or testicular and kidney cancers.

76. Recent research conducted by the National Toxicology Program ("NTP"), a division of the National Institute for Environmental Health Sciences ("NIEHS"), has also linked certain exposures to PFOA to pancreatic cancer.

77. Human epidemiological studies, relied upon by the EPA for purposes of the agency's health advisories on PFOS, found associations between PFOS exposure and high cholesterol, thyroid disease, and adverse reproductive and developmental effects, including gestational diabetes, preeclampsia, and low birth weight. The EPA found that the developing fetus and newborns are particularly sensitive to PFOS-induced toxicity.

78. In addition, PFAS compounds have been shown to affect growth, learning, and behavior of infants and older children, decrease women's ability to become pregnant and to carry a pregnancy to term, and interfere with the body's natural hormones.

79. Laboratory research has shown that PFOS and PFOA are toxic to laboratory animals, producing reproductive, developmental, and systemic effects.

80. The EPA has found that PFOS and PFOA are associated with cancer in humans.

81. A March 2020 peer-reviewed study applied ten key characteristics of carcinogens

to 26 PFAS compounds, including PFOA, PFOS, and PFHxS. The "key characteristics of carcinogens" framework is used for cancer hazard identification.

82. That study found "strong evidence" that multiple PFAS induce oxidative stress, are immunosuppressive, and modulate receptor-mediated effects. The study found "suggestive evidence" that some PFAS can induce epigenetic alterations and influence cell proliferation.

83. In particular, the study identified evidence that: (a) PFOA induces epigenetic alterations; induces oxidative stress; induces chronic inflammation; is immunosuppressive; modulates receptor-mediated effects; and alters cell proliferation; (b) PFOS induces epigenetic alterations; induces oxidative stress; induces chronic inflammation; is immunosuppressive; modulates receptor-mediated effects; and alters cell proliferation; and (c) PFHxS induces oxidative stress; is immunosuppressive; modulates receptor-mediated effects; and alters cell proliferation.

84. Similar traits associated with carcinogenicity were identified with respect to other PFAS compounds utilized in AFFF products designed, manufactured, marketed, distributed, provided, supplied, and sold by Defendants.

85. Another peer-reviewed study published in 2020 found further evidence that certain PFAS compounds, particularly PFOS and PFOA, result in premature births, decreased fertility, and increased odds of low birth weight. These adverse effects on reproductive health were demonstrated by an analysis of birth outcomes in Oakdale, Minnesota, where a portion of the population faced elevated exposure to PFAS due to long-term contamination of drinking water supplies from industrial PFAS-related waste disposal. The study focused on birth outcomes in the area from 2002 to 2011. Reproductive outcomes improved significantly following the installation of a water filtration facility in Oakdale at the end of 2006 that removed PFAS, demonstrating the causal relationship between exposure to high level of PFAS in drinking water and reproductive

health.

86. In October 2021, EPA also released a final human health toxicity assessment for GenX chemicals. GenX chemicals, as explained further below, were a trademarked family of shorter-chain PFAS chemicals marketed since the 2010s by DuPont as a purportedly safer alternative to PFOA. The EPA's assessment resulted in a lower, more protective toxicity value for GenX chemicals relative to EPA's 2018 draft toxicity assessment.

87. On November 16, 2021, EPA further provided the Science Advisory Board PFAS Review Panel with recent scientific data and new analyses that indicate negative health effects may occur at much lower levels of exposure to PFOA and PFOS than had previously been understood, and that PFOA is a likely carcinogen.

88. These EPA analyses underwent peer review, and in 2022, they formed the basis for revised health advisories for certain PFAS, and were relied upon in the development of Maximum Contaminant Level Goals and a National Primary Drinking Water Regulation for PFOA and PFOS, and four other PFAS chemicals (described below).

89. In November 2023 the World Health Organization's International Agency for Research on Cancer recognized that PFOA and PFOS present carcinogenic hazards to humans.

90. The increasing scientific consensus is that lower levels of PFAS, particularly PFOA and PFOS, in water supplies or natural resources to which humans are exposed is cause for concern and a potential human health issue.

B. THE PUBLIC'S UNDERSTANDING OF PFAS, A NATIONWIDE ENVIRONMENTAL PROBLEM, CONTINUES TO EVOLVE

91. Given their physical and chemical properties, PFAS chemicals have become incredibly widespread in the environment, contaminating drinking water supplies, water infrastructure (including stormwater systems, water treatment plants, drinking water delivery

infrastructure, and wastewater systems and biosolids).

92. According to the EPA, between 1999 and 2012, PFOA and PFOS have been detected in the blood serum of 99 percent of the U.S. population. This is particularly troubling given the significant adverse health effects these two PFAS may pose.

93. In October of 2017, the Director of the U.S. Center for Disease Control's National Center for Environmental Health, Patrick Breysse, described the chemicals as "one of the most seminal public health challenges for the next decades" and estimated 10 million Americans were drinking contaminated water. Current research estimates that this number may be significantly higher.

94. The EPA began to investigate the safety of PFOA and PFOS in or around 1998 following some limited disclosures by 3M and others. The Agency did not begin to issue health advisories for these chemicals until January 8, 2009.

95. The 2009 EPA health advisory noted merely that "action should be taken to reduce exposure" to drinking water containing levels of PFOA and PFOS exceeding 400 parts per trillion ("ppt") and 200 ppt, respectively.

96. In May 2016, the EPA significantly revised its PFOA and PFOS lifetime health advisory, recommending that drinking water concentrations for PFOA and PFOS, either alone or combined, should not exceed 70 ppt.

97. Notably, the EPA's health advisories are "informal technical guidance to assist federal, state, and local officials, as well as managers of public or community water systems in protecting public health. They are not regulations and should not be construed as legally enforceable federal standards."

98. In January 2023, the EPA released its Clean Water Act Effluent Limitations

Guidelines Plan 15, setting forth plans to develop technology-based standards for certain industries that discharge PFAS. This Plan announced rulemaking proceedings to address PFAS discharges from landfills, and a new Publicly Owned Treatment Works (POTW) Influent Study. This study will collect more data on POTW influent from a broad range of industries that could result in revised Effluent Limitations Guidelines ("ELGs") in the future.

99. On February 22, 2021, the EPA finalized its decision to regulate levels of PFOS and PFOA in drinking water under the Safe Drinking Water Act, including by proposing enforceable MCLs.

100. In June 2022, the EPA announced drastically reduced health advisories for PFOA and PFOS, reducing the tolerance for these contaminants from 70 ppt to 0.004 ppt and 0.020 ppt, respectively.

101. At the same time, the EPA also announced new health advisory levels for two other PFAS, GenX (10 ppt) and PFBS (2,000 ppt).

102. On April 10, 2024 the EPA finalized, enforceable MCLs for six PFAS known to occur in drinking water, including PFOA, PFOS, perfluorononanoic acid ("PFNA"), GenX, PFHxS, and perfluorobutane sulfonic acid ("PFBS"). The MCLs for PFOS and PFOA are 4 ppt for each, and the MCLs for PFHxS, PFNA, and GenX are 10 ppt for each. The PFAS chemicals subject to this regulation, apart from PFOA and PFOS, are subject to a Hazard Index when mixtures contain two or more of those PFAS. In addition, the EPA enacted advisory Maximum Contaminant Level Goals of zero for both PFOS and PFOA.

103. On April 17, 2024 the EPA designated PFOA and PFOS as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)(also known as "Superfund").

104. The State of Michigan has also enacted PFAS-related regulations as more information concerning their health risks has become available.

105. In November 2017, Michigan created the Michigan PFAS Action Response Team (MPART), a multi-agency group tasked with investigating PFAS sources, protecting drinking water, and informing the public.

106. In January 2018, the State set enforceable groundwater cleanup criteria of 70 ppt for both PFOA and PFOS, which also triggered classification of PFOA and PFOS as "hazardous substances" under Part 201 of the Natural Resources and Environmental Protection Act. MCL 324.20101(1)(x); Mich. Admin. Code R 299.6(12).

107. On August 3, 2020, EGLE promulgated drinking water standards, establishing MCLs for seven PFAS compounds. Those MCLs set PFOA at 8 ppt, PFOS at 16 ppt, Perfluorononanoic acid ("PFNA") at 6 ppt, Perfluorohexanesulfonic acid ("PFHxS") at 51 ppt, Perfluorobutane sulfonic acid ("PFBS") at 420 ppt, Hexafluoropropylene oxide dimer acid ("GenX") at 370 ppt, and Perfluorohexanoic acid ("PFHxA") at 400,000 ppt.

108. These MCLs amended existing drinking water regulations and were intended to enhance public health protection by reducing people's exposure to PFAS.

109. In 2021, 3M filed suit to invalidate the new Michigan drinking water PFAS MCLs, alleging, *inter alia,* that EGLE had not adequately estimated the costs "to businesses and other groups" of compliance with new groundwater standards, that the new drinking water MCLs would trigger. Lower courts sided with 3M, including in an August 2023, Michigan Court of Appeals decision. *3M Co. v. Dep't of Env't Great Lakes & Energy*, No. 364067, 2023 WL 5418164, at *1 (Mich. Ct. App. Aug. 22, 2023). On March 7, 2025, the Michigan Supreme Court vacated the decision of the Michigan Court of Appeals and remanded the case for the court to consider whether

subsequent events have mooted 3M's challenge, among other issues.

110. Effective in July 2020, Michigan outlawed the use of firefighting foam with intentionally added PFAS in training exercises. Mich. Comp. Laws Ann. § 29.369c. In addition, the state required training for firefighters on best management practices for use of AFFF, *id.*, and required any use of AFFF be reported immediately after an incident to the Michigan Pollution Emergency Alert System. Mich. Comp. Laws Ann. § 324.14703.

C. DEFENDANTS' AFFF PRODUCTS HAVE CONTAMINATED THE AUTHORITY'S PROPERTY WITH PFAS

111. The PFAS critical to the claims asserted in this Complaint are components of AFFF, which is widely used to suppress and extinguish fires of flammable liquids, such as fuel and oil.

112. In the 1940s, 3M began to experiment with a process called electrochemical fluorination to create the carbon-fluorine bonds that are the key components of PFAS, including PFOA, PFOS, and PFHxS.

113. 3M was the only known manufacturer of PFOS and PFHxS in the United States.

114. The other major carbon-fluorine bond producing process, which was used by the remaining Defendants, is called telomerization. This process generally results in PFOA and other carboxylates.

115. Beginning in the 1950s through 2000, 3M sold PFOA to Old DuPont for use in Old DuPont's manufacturing operations. After 3M ceased production beginning in or around 2002, Old DuPont began producing PFOA.

116. Recognizing the compounds' strong surfactant properties described above and building on its earlier experiments, 3M began to develop AFFF containing PFOS in the early 1960s to suppress flammable liquid fires that cannot be effectively extinguished with water alone.

117. In the late 1960s, the United States military issued military specification MIL-F-

24385 governing the requirements for AFFF ("AFFF MilSpec"). It required that the AFFF concentrate "consist of fluorocarbon surfactants plus other compounds . . ." The AFFF MilSpec, however, contains no further requirements concerning these fluorocarbons surfactants, such as the length of the fluorine-carbon chain or the type(s) of PFAS to be utilized in meeting the performance specification. The AFFF MilSpec also states that "[t]he material shall have no adverse effect on the health of personnel when used for its intended purpose." The current version of the AFFF MilSpec still contains that language.

118. The United States government has expressly clarified that the AFFF MilSpec "was a **performance** military specification (as opposed to a **detail** military specification); meaning that the product manufacturers [and not the United States government] determine[d] the exact formulation and specific perfluorocarbon surfactants . . ."

119. The FAA incorporated the AFFF MilSpec into airport certification requirements under the regulations applicable to Commercial Service Airports, including the Authority's Airport. 14 C.F.R. Part 139 ("Part 139"). The Part 139 regulations specify the type and quantity of fire extinguishing agents, including AFFF, that each airport must have available on site as part of its Aircraft Rescue and Firefighting ("ARFF") operations. 14 CFR § 139.317. The regulations define AFFF only as "aqueous film forming foam agent." 14 C.F.R. § 139.5.

120. Part 139 states that the FAA also authorizes, through Advisory Circulars ("ACs"), additional extinguishing agents other than AFFF, for use at Part 139 airports. 14 C.F.R. § 139.317 (h)&(j). In 1985, the FAA issued AC 150/5210-6C, authorizing AFFF, "Protein Foam" and "Fluoroprotein Foam" as fire extinguishing agents for use at Part 139 airports.

121. In 2004, the FAA issued AC 150/5210-6D, which superseded the 1985 AC 150/5210-6C , and authorized AFFF, Fluoroprotein Foam, Film Forming Fluoroprotein Foam, and

Protein Foam as fire extinguishing agents for use at Part 139 airports.

122. To demonstrate compliance with Part 139 requirements regarding the type and quantity of fire extinguishing agents each airport must have for their ARFF operations. Commercial airports are required to purchase only foams listed on the Navy's Qualified Products' List /Qualified Products' Database ("QPL").

123. Generally, manufacturers, including Defendants, initiate the process to have their foams listed on the QPL, but Defendants delayed doing so. As a result, despite the FAA's Advisory Circulars permitting Protein Foams since 1985, only AFFF products were included on the QPL until 2023.

124. On January 6, 2023 the U.S. military issued MIL-PRF-32725 to allow Fluorine-Free Foams ("F3") for use on class B hydrocarbon liquid fuel fires, as an alternative to AFFF. MIL-PRF-32725 (available at https://media.defense.gov/2023/Jan/12/2003144157/-1/-1/1/MILITARY-SPECIFICATION-FOR-FIRE-EXTINGUISHING-AGENT-FLUORINE-FREE-FOAM-F3-LIQUID-CONCENTRATE-FOR-LAND-BASED-FRESH-WATER-APPLICATIONS.PDF).

125. On January 12, 2023, the FAA announced to airports it will accept the airport operator's use of an F3 extinguishing agent at Certificated Part 139 airports "once the agent passes the military performance standards (MIL-PRF-32725) and has been added to the [QPL]" (See Part 139 CertAlert 23-01: New Military Specification for Performance-Based Standards for FluorineFree Aircraft Fire Fighting Foam).

126. On September 13, 2023 the FAA issued a CertAlert to Part 139 airports notifying them that an F3 foam now meets MIL-PRF-32725 that "can now be used at Part 139 airports." National Part 139 CertAlert No. 23-07 (Sept. 13, 2023) (*available at*

https://www.faa.gov/sites/faa.gov/files/part_139_cert_alert_23_07_F3_Release.pdf).

127. The FAA issued AC 150/5210-6E on November 27, 2023, cancelling the 2004 AC, and listing the permissible fire extinguishing agents as AFFF and F3 foams.

128. In addition, the prior and current versions of FAA's Airport Certification Handbook (respectively, Orders 5280.5C and 5280.5D) confirm that fire extinguishing agents must conform to the AFFF MilSpec, as amended.

129. The first F3 products meeting MIL-PRF-32725 were listed on the QPL beginning in September 2023.

130. As of March 1, 2025, there are four F3 products listed on the QPL.

131. From the 1960s to about 1973, 3M was the sole supplier of AFFF products. Beginning in about 1973, fluorotelomer-based AFFF manufacturers entered the market.

132. AFFF is applied by firefighters in the field by mixing foam concentrate and water to make a foam solution. When applied to a fire, the foam solution is aerated at the nozzle. The foam solution is sprayed out to coat the fire, blocking the supply of oxygen feeding the fire and creating a cooling effect and evaporation barrier.

133. In fact, in order for commercial airports to maintain their Part 139 certificate, they are required to demonstrate to FAA through records and/or through a live demonstration, that each piece of firefighting equipment using AFFF is properly preportioning the mixture of foam and water. Until 2019, the only method for demonstrating this proportioning process was to spray AFFF on the ground.

134. In other words, it is instructed by, intended by, and foreseeable to, the AFFF manufacturer or supplier that AFFF will be mixed with water and sprayed in such a manner that it can potentially seep into the groundwater and soil, contaminating the environment.

135. PFAS-based AFFF is the predominant commercial PFAS application that, when used as intended, releases toxic chemicals directly into the environment in a manner enabling them to potentially seep into the groundwater, contaminate drinking water supplies, and travel in the environment to cause further, environmental contamination.

136. A single firefighting event or training exercise may have resulted in the release of thousands of gallons of foam solution laced with PFAS that likely enters and can contaminate the environment.

137. For decades, PFAS-based AFFF products have been stored and used for fire suppression, fire training, and flammable vapor suppression at hundreds of locations, such as fire training schools, fire stations, military installations, and Part 139 commercial airports, as well as at petroleum refineries, storage facilities, and chemical manufacturing plants throughout the United States, including in and around the Airport.

138. Prior to the early 2000s, the Airport's firefighters were Airport employees.

139. At least two of the Airport's current firefighting trucks have been exposed to PFAS-laden AFFF and will need to be decontaminated or replaced after the AFFF has been removed. Rescue 4 currently contains 420 gallons of the AFFF concentrate and Rescue 3 contains 210 gallons of the AFFF concentrate. In addition, there are 55-Gallon drums stored at the Airport, containing approximately 1,045 gallons of PFAS-laden AFFF.

140. The State of Michigan has removed 175 gallons of AFFF from the Airport.

141. Fire training exercises involving AFFF are common and necessary, particularly at fire training schools, fire stations, military installations, and Part 139 airports, and have been performed many thousands of times since the 1960s.

142. Despite the recent phase-out of certain long-chain PFAS, further discussed below,

much of the current AFFF stockpiles still contain long-chain PFAS constituents due to the long shelf-life of these products. PFAS-based AFFF thus continues to be widely stored and used, including at the Airport.

143. Significantly, in recognition of the dangers of PFAS, the AFFF MilSpec was amended in September 2017 to state expressly that the U.S. Department of Defense ("DOD") seeks "to acquire and use a non-fluorinated AFFF formulation or equivalent firefighting agent to meet [its] performance requirements …." Again, in April 2020, DOD amended the MilSpec to make clear that the AFFF MilSpec requires only that AFFF "[c]oncentrates shall consist of surfactants plus other compounds…" – not necessarily fluorosurfactants. Most recently in January 2023, DOD updated the MilSpec performance standards for firefighting foam concentrates specifying the concentrates are to be "fluorine-free" and to contain no intentionally added PFAS and final F3 concentrate cannot contain more than 1ppb of PFAS.

144. Had Defendants adequately disclosed the potential environmental and human health hazards posed by their AFFF products, regulators including the DOD would have taken steps to prevent, control, or minimize the environmental and human health threats from AFFF containing and/or breaking down into PFAS (including PFOA, PFOS, and PFHxS), much sooner.

145. Had Defendants adequately disclosed the potential environmental and human health hazards posed by their AFFF products, the Authority could have worked with regulators to take steps to prevent, control, or minimize the environmental and human health threats from AFFF containing and/or breaking down into PFAS (including PFOA, PFOS, and PFHxS) much sooner.

D. THE DEFENDANTS KNEW ABOUT BUT CONCEALED THE DANGERS OF PFAS CONTAINED IN AFFF

146. 3M and DuPont have known or, at a minimum, should have known for many decades that PFOA, PFOS, and other PFAS compounds are mobile and persistent, bioaccumulative

and biomagnifying, volatile, and, above all, toxic.

147. The other Defendants, each of which designed, manufactured, marketed, provided, supplied, sold, and/or distributed PFAS-based AFFF and/or AFFF component products, knew, or at the very least should have known, that in their intended and common use, their PFAS-containing AFFF products would harm the environment and human health, including through information they obtained as part of their participation in industry trade associations.

148. Defendants were careful to withhold the most damning information about PFOS, PFOA, and other PFAS from the public and federal, state and local regulators.

149. 3M conducted extensive toxicity studies on PFAS, including PFOS and PFOA, as early as the 1950s, concluding that the chemicals were toxic.

150. Further toxicity studies conducted by 3M scientists in the late 1970s confirmed that the chemicals were even "more toxic than anticipated."

151. In 1978, 3M conducted studies on monkeys and rats, feeding them various dosages of PFOS and PFOA. All monkeys in the study died within the first few days after being given PFOS at a dosage of 4.5 mg/kg/day. Monkeys being given 100 mg/kg/day of PFOA "all died during weeks 2 and 5 of the study." The Company's studies showed that both PFOA and PFOS affected the liver and gastrointestinal tract of the animals being tested.

152. 3M concluded that PFOS was "the most toxic" of the compounds studied and "certainly more toxic than anticipated."

153. 3M consulted with Harold Hodge, a well-known toxicologist, who emphasized that it was of "utmost importance" to determine whether these chemicals "or its metabolites are present in man, what level they are present, and the degree of persistence (half-life) of these materials."

154. Further, in 1975, 3M was alerted by third-party researchers that PFOS was

detectable in human blood serum and thus had obviously spread beyond the immediate site of its applications and was bioaccumulating. 3M's own research confirmed by the next year that the level of fluorochemicals in the blood of its own workers was "1,000 times normal."

155. Conducting research around its manufacturing plants, 3M knew by 1979 that its fluorochemicals "bioaccumulated more readily in the gastrointestinal tract, fat and reproductive system [at least in] channel catfish[.]"

156. By 1979, 3M recognized that fluorochemicals may pose a cancer risk. Indeed, one of its scientists pressed that it was "paramount to begin now an assessment of the potential (if any) of long term (carcinogenic) effects for these compounds which are known to persist for a long time in the body and thereby give long term chronic exposure."

157. 3M never published its toxicity studies and worked actively to stifle research on the adverse effects of PFAS, including PFOA and PFOS. Indeed, 3M kept John Giesy, Ph.D., Professor and Canada Research Chair in Environmental Toxicology in the Department of Veterinary Biomedical Sciences and Toxicology Centre at the University of Saskatchewan, formerly a professor at Michigan State University, on its payroll to the tune of millions of dollars between at least 1998 to 2009, for the purpose of influencing purportedly independent academic research. Professor Giesy has published more than 1,100 peer-reviewed articles and has been cited more than any other scientist in his field. He was an editor of several academic journals and because he was an expert on PFAS, who was not known to work for industry or that he was on 3M's payroll, he was assigned to review articles on PFAS submitted for publication. It was Professor Giesy's professed goal to keep unfavorable papers regarding PFAS out of the academic literature, lest potential plaintiffs find scientific support for legal theories seeking to hold 3M liable for injuries.

158. 3M also knew the environmental implications associated with PFAS compounds, including PFOS and PFOA, but refused to allow testing to perform precise ecological risk assessments. One of its longtime scientists, Dr. Richard Purdy, stated in an internal email in early 1999 or late 1998: "PFOS is the most onerous pollutant since pcb and you want to avoid collecting data that indicates that it is probably worse. I am outrage[d.]"

159. Despite 3M's knowledge of PFAS toxicity and potential carcinogenicity, the mobility and persistence in the environment of such chemicals, and their tendency to bioaccumulate and biomagnify, the Company continued to manufacture, sell, and distribute PFAS-based AFFF until at least 2000.

160. In March 1999, Dr. Purdy resigned, exhausted by the company's refusal to research PFAS's environmental effects and its failure to address the chemicals' known environmental harms. His resignation letter expressed frustration that instead of further studying known harms, and notifying regulators, the Company had advised its employees not to put their thoughts and research concerning PFOS or PFOA in writing, because these communications would need to be disclosed during discovery in future litigation.

161. In his resignation letter, Dr. Purdy stated:

> 3M continues to make and sell these chemicals, though the company knows of an ecological risk assessment I did that indicates there is a better than 100% probability that perfluorooctansulfonate is biomagnifying in the food chain and harming sea mammals. This chemical is more stable than many rocks. And the chemicals the company is considering for replacement are just as stable and biologically available. The risk assessment I performed was simple, and not worst case. If worst case is used, the probability of harm exceeds 100,000%.

Dr. Purdy's letter concluded by stating that he could no longer work for a company "concerned with markets, legal defensibility and image over environmental safety."

162. Dr. Purdy copied the EPA on his resignation letter.

163. Shortly thereafter, 3M supplemented its prior submissions to the EPA with critical information referenced by Dr. Purdy. In 2000, 3M "voluntarily" ceased production of certain PFAS compounds, including PFOS and PFOA.

164. In April 2006, 3M paid a penalty of more than $1.5 million to the EPA for its failure to disclose pertinent studies regarding PFOA and PFOS.

165. Much like 3M, DuPont has been aware of the toxicity of PFAS, including PFOA, for decades.

166. By 1961, DuPont's own researchers had concluded that PFOA was toxic and should be "handled with extreme care." During the 1960s, DuPont also had knowledge that PFOA caused adverse liver reactions in dogs and rats.

167. By 1976, DuPont was also aware of research reports that detected organic fluorine in blood bank samples in the U.S., which the researchers believed to be a potential result of human exposure to PFOA. In other words, DuPont knew or should have known that PFOA was traveling in the environment and bioaccumulating in other organisms, including in people.

168. By 1982, DuPont's corporate Medical Director, Bruce Karrh, in internal correspondence confirmed that PFOA stays in the blood for a long time and registered his concern that members of the local community may be affected by PFOA releases. DuPont then began a clandestine water sampling program to determine how far a distance from its operations PFOA remained in the waterways at elevated levels. DuPont detected PFOA in water supplies at a distance of at least 79 miles from its Parkersburg Plant.

169. In 1979, DuPont further became aware of the PFOA/PFOS toxicity studies 3M had conducted on monkeys and rats described above.

170. About three years later, 3M also shared a study undertaken on pregnant rats,

indicating that PFOA led to adverse effects in fetuses. DuPont tested the blood of female workers who had given birth and had been exposed to PFOA, documenting that PFOA moved across the human placenta.

171. DuPont transferred all women out of work assignments with potential exposure to PFOA, but concealed its pregnancy-related study from the workers, the EPA and the public.

172. During the mid-1980s, DuPont continued to find evidence of toxicity of PFOA. In 1985 and 1986, researchers from DuPont's Haskell Laboratory for Toxicology and Industrial Medicine published two studies on the toxicity of PFOA. One study found PFOA to be "moderately toxic," producing "an increase in liver size and corneal capacity" in rats exposed by inhalation to PFOA; the other studied dermal toxicity in rats and rabbits and found skin irritation in both, and increased liver size in rats.

173. By 1988, DuPont was aware that at least one toxicity study performed on laboratory rats revealed a relationship between PFOA exposure and increased rates of certain types of cancer, including testicular cancer.

174. In 1988, DuPont internally classified PFOA as a possible human carcinogen.

175. Evidence of PFOA's toxic effects continued to mount. In 1999, DuPont received data from a laboratory study on the effects of PFOA exposure on primates that showed that two of twenty-two monkeys had died, including one that had received the lowest dose of PFOA. And, by June 2000, DuPont was aware that the American Council of Governmental and Industrial Hygienists had designated PFOA as a "confirmed animal carcinogen."

176. Despite its knowledge of PFOA's toxicity and carcinogenicity, its mobility and persistence in the environment, and its tendency to bioaccumulate, DuPont continued to use PFOA in its products (and, beginning in 2002, also manufactured the chemical once its primary

manufacturing source, 3M, had exited that market), including surfactants made for use in manufacturing AFFF.

177. Having doubled down on the PFAS business, DuPont continued to actively conceal the risks of PFOA and other PFAS from the public. Beginning in 2003, DuPont paid various consultants, including the Weinberg Group, thousands of dollars to implement a comprehensive strategy to attack and discredit those who alleged adverse health effects from PFOA, to prevent third parties from connecting DuPont to PFOA health problems, to coordinate media and third-party communications, and to thwart any PFOA-related litigation.

178. In February 2003, a manager at DuPont's Washington Works Plant, near Parkersburg, West Virginia, made knowingly false and misleading statements to the media, that: "[i]n more than 50 years of [PFOA] use by [DuPont] and others, there have been no known adverse human health effects associated with the chemical," that "all" of the available scientific research "has been provided to both state and federal regulators," that "epidemiological studies of workers do not indicate an increased risk of cancer associated with exposure to [PFOA]," that "[DuPont] has made significant efforts to respond to the public honestly and openly with correct information about [PFOA]," and that "the use of [PFOA] at the Washington Works site has not posed a risk to either human health or the environment."

179. Later, in March and April of 2003, various DuPont employees and executives — including its Vice President and General Manager of Fluoroproducts, the Director of its Haskell Laboratory, the Spokesperson for the Washington Works Plant, and its CEO — made public statements denying that DuPont had seen any negative impacts on human health or the environment caused by DuPont's use of PFOA.

180. DuPont made multiple, additional knowingly false and misleading public

statements regarding the toxicity and adverse health effects of PFOA and other PFAS.

181. DuPont settled litigation brought by Parkersburg residents in 2005. As part of its settlement DuPont financially supported what was dubbed the "C8 science panel," made up of three independent epidemiologists from Emory University, Brown University, and the London School of Hygiene and Tropical Medicine, and tasked with researching the health effects of PFOA based on blood samples and other health data taken from almost 70,000 residents of the Mid-Ohio Valley.

182. Also in 2005, the EPA fined DuPont $16.5 million, then the largest civil administrative penalty the Agency had ever issued, for the Company's failure to report possible health risks associated with PFOA.

183. With the writing on the wall and upon invitation by the EPA, DuPont agreed in 2006 to join the "PFOA Stewardship Program" working towards the elimination of PFOA by 2015.

184. In the meantime, however, the Company continued to manufacture PFOA, and at least until 2008 the Company made fluorotelomers with PFOA byproducts for the express and intended purpose of being used in manufacturing AFFF.

185. The C8 Science Panel completed its research in 2013, finding likely connections between PFOA and high cholesterol, ulcerative colitis, pregnancy-induced hypertension, thyroid disease, testicular cancer, and kidney cancer.

186. Beginning in 2013, DuPont replaced its production and use of PFOA with GenX chemicals.

187. GenX is the trade name for the short-chain PFAS chemicals, including hexafluoropropylene oxide dimer acid, that allow for the creation of fluoropolymers without PFOA.

188. DuPont first began generating GenX in or around 1980, but it remained a chemical byproduct of other manufacturing processes until the 2010s.

189. While DuPont, in a 2010 marketing brochure, touted GenX as having "a favorable toxicological profile," studies have shown that exposure to GenX has negative health effects, suggestive of cancer and other diseases on the kidney, blood, immune system, developing fetuses, and especially in the liver following oral exposure. Indeed, as discussed above, based on continuing human health effects assessment research for GenX chemicals since 2018, the EPA has recently issued an MCL of 10 ppt for GenX in drinking water.

190. Further, like PFOA and other PFAS compounds, GenX is persistent in the environment, not readily biodegradable, and mobile in the presence of water.

191. DuPont acknowledged in the same brochure referenced above that GenX "is chemically stable and, if released, would be environmentally persistent."

192. In 2015, after Chemours was spun out of Old DuPont into an independent, publicly traded company, Chemours took over production of legacy DuPont PFAS chemistry, including GenX.

193. Like DuPont, Chemours has, since 2015, designed, manufactured, marketed, distributed, and sold its PFAS compounds, including GenX, for use in AFFF products.

194. AGC, Archroma, Arkema, BASF, Buckeye, ChemDesign, Chemguard, Chem Inc., Clariant, Deepwater, Dynax, Nation Ford, Tyco, Carrier Fire, Carrier Global, and RTX also knew, or should have known, that in its intended and common use, PFAS-based AFFF and/or AFFF component products would injure and/or threaten the environment and public health. This information was accessible to each of them, including as part of ongoing involvement in various trade associations constituted for the purpose of defending the AFFF franchise, including the

Firefighting Foam Coalition ("FFFC").

195. AGC, Archroma, Arkema, BASF, Buckeye, ChemDesign, Chemguard, Chem Inc., Clariant, Deepwater, Dynax, Nation Ford, Tyco, Carrier Fire, Carrier Global, and RTX knew, or should have known, that in its intended and common use, PFAS-based AFFF and/or AFFF component products would injure and/or threaten the Authority's resources and properties, including groundwater, stormwater, soils, and equipment.

196. Information regarding PFAS compounds was readily accessible to AGC, Archroma, Arkema, BASF, Buckeye, ChemDesign, Chemguard, Chem Inc., Clariant, Deepwater, Dynax, Nation Ford, Tyco, Carrier Fire, Carrier Global, and RTX because each is an expert in the field of AFFF manufacturing and/or the materials needed to manufacture AFFF, and each has detailed information and understanding about the chemical compounds that form AFFF products.

197. The FFFC is an AFFF trade group that was formed in 2001 to advocate for AFFF's continued viability.

198. Arkema, BASF, Buckeye, Carrier Fire, Carrier Global, Chemguard, DuPont, Dynax, RTX, and Tyco, including through their predecessors and/or subsidiaries, were members of the FFFC (FFFC Defendants). DuPont had extensive knowledge about the toxicity associated with PFAS, including as alleged in this complaint.

199. Through their involvement in the FFFC, as well as a variety of other trade associations and groups, FFFC Defendants shared knowledge and information regarding PFAS.

200. The FFFC Defendants worked together to protect AFFF from scrutiny.

201. Their close cooperation included messaging on PFOA's toxicological profile.

202. The FFFC's efforts were designed to shield its members and the AFFF industry from the detrimental impact of the public and regulators learning about PFOA's harms to human

health and the environment.

203. FFFC Defendants regularly published newsletters and attended conferences promoting their AFFF products as appropriate for widespread use.

204. These coordinated efforts by the FFFC Defendants were meant to dispel concerns about the impact AFFF had on the environment and human health. They worked in concert to conceal known risks of their AFFF from the government and public.

205. The FFFC lobbied hard for AFFF. At conferences, in journals, and in meetings with the military, the EPA, and other regulators, it repeated a key talking point for years: only one PFAS chemical, PFOS, had been taken off the market. Thus, the FFFC asserted, since the FFFC members' products did not contain PFOS, their products were safe.

206. However, the FFFC Defendants knew their products contained PFOA and other PFAS chemicals, which Defendants knew or, at a minimum, should have known were similarly harmful to the environment and public health, yet they continued to promote their AFFF products and claim they were safe.

207. While this was known to FFFC Defendants, it was not fully understood by the users of AFFF, the public, and regulators.

208. RTX, Carrier Fire and Global Carrier, through their own actions and those of their predecessor entities whose AFFF liabilities they contractually assumed, recognized that they were subject to liability for their AFFF products.

209. UTC, now known as RTX, further knew that the FFFC falsely told the federal government that UTC's telomer-based AFFF did not contain C8 surfactants. In a 2008 email exchange, two UTC employees discussed the FFFC's claim to DOD that telomer-based products were made with C6 surfactants rather than C8 surfactants. They agreed this claim was untrue and

was likely done to distinguish telomer AFFF from 3M's discredited AFFF. One of UTC's employees observed that the FFFC had been "economical with the truth" when it led "the EPA to believe that firefighting foam agents were only made with C6 surfactants."

210. Additionally, all Defendants knew or, at a minimum, should have known that their PFAS-based AFFF and/or AFFF component products, given their chemical composition, easily dissolve in water (and indeed the products were designed to be mixed with water and sprayed on the ground), are mobile, resist degradation, and tend to bioaccumulate and biomagnify.

211. Despite their knowledge of the harmful properties of PFAS chemicals, following 3M's withdrawal from the PFOA/PFOS market beginning in or around 2000, DuPont and the other Defendants made renewed commitments to protect their lucrative AFFF lines of business.

212. In response to concerns expressed by the EPA regarding the environmental viability of AFFF, the FFFC was formed in 2001, partly to dispel such concerns. DuPont was a founding member.

213. DuPont and other Defendants eventually transitioned to the use of short-chain fluorotelomers with a maximum of six carbon atoms, claiming those chemicals are safer to environmental and human health.

214. Even if such claims were true, Defendants could have begun much earlier to transition from long-chain to short-chain fluorotelomers. Despite their claims that these short-chain alternatives substantially mitigate the risk of human and environmental harm from AFFF products, they failed to adopt what would present a feasible alternative to the then-current formulations of PFAS-based AFFF. Their refusal to adopt this assertedly safer feasible alternative confirms that their products based on long-chain fluorotelomers were not reasonably safe for their intended applications.

215. Moreover, effective fluorine-free firefighting foams that do not pose the same risks to human health and the environment as Defendants' AFFF products exist and are used in some of the world's largest airports, including London Heathrow, London Gatwick, Copenhagen, Stuttgart, and Dubai, among others.

216. In 2003 all 27 of Australia's busiest airports began transitioning to fluorine-free foams, and by 2010 they had discontinued using AFFF altogether. The state of Queensland banned the use of PFAS-laden AFFF completely in 2016, and a nationwide ban went into effect in 2018.

217. In the United States, however, Part 139 airports have not had the option to transition to fluorine-free foams until September 2023 because the Defendants concealed the potential health and environmental risks of their AFFF products, including from regulators, for many years.

218. Defendants failed to adequately research and investigate the design, manufacture, or sale of fluorine-free firefighting foam, or did so and concealed their results. They avoided fluorine-free alternatives to protect their existing, lucrative AFFF lines of business.

219. Defendants' failure to pursue this feasible alternative to PFAS-based AFFF further confirms that their AFFF products were not reasonably safe for their intended applications.

E. DEFENDANTS' AFFF PRODUCTS HAVE CAUSED (AND CONTINUE TO CAUSE) PFAS CONTAMINATION OF THE AIRPORT'S GROUNDWATER, SOILS, STORMWATER AND OTHER AIRPORT PROPERTIES AND SYSTEMS

220. Defendants' PFAS-based AFFF and AFFF component products have been used at specific locations and facilities at and near the Airport at specific times.

221. PFAS-based AFFF and AFFF component products manufactured by Defendants were handled, stored and used at the Airport, by its ARFF, and upon information and belief, by local fire departments including the Traverse City Fire Department, Garfield Township Fire Department, the Grand Traverse Metro Fire Department, Peninsula Township Fire Department,

among others.

222. AFFF and AFFF component products were likely also handled, stored and used at specific locations and times near the Airport and its environs, at the Coast Guard Air Station, and by manufacturers.

223. EGLE has informed the Authority that certain areas associated with releases of AFFF qualified as a "Facility" under Part 201 of the Michigan Natural Resources and Environmental Protection Act, which obligated the Authority to take remedial actions to protect public health and safety.

224. The Authority has tested its expanding number of monitoring wells for PFAS at specific locations in Airport groundwater and found PFAS in high concentrations at specific locations.

225. Monitoring wells at the Airport have had PFOA and PFOS contamination above the state Maximum Contaminant Levels ("MCLs") for PFOA of 8 ppt and for PFOS of 16 ppt these chemicals, and have also found PFHxA, PFPeA, PFBA, 6:2 FTS, and 8:2 FTS, among other PFAS.

226. Soils at specific locations at the Airport have found PFAS contamination, including 8:2 FTS, 6:2 FTS, PFNA, PFOS, and PFOA, among other PFAS.

227. Investigation is ongoing.

228. The design, manufacture, marketing, promotion, distribution, supply, and/or sale of AFFF products and AFFF component products by 3M, AGC, Archroma, Arkema, BASF, Buckeye, ChemDesign, Chemguard, Chem Inc., Clariant, Deepwater, Dynax, Nation Ford, Tyco, Carrier Fire, Carrier Global, and RTX resulted in the release of PFOS, PFOA, PFNA, PFHxS, PFHxA, PFPeA, PFBA, 6:2 FTS, and 8:2 FTS, among other PFAS, in the Airport's groundwater,

soils, stormwater and other Airport properties and systems under its ownership or management, that has caused contamination and injuries.

229. PFAS-based AFFF products used and disposed in the ordinary, intended, and required manner at these and other locations have contaminated the Authority's resources and properties, including groundwater, stormwater, soils, and equipment.

230. Upon information and belief, during routine training exercises, PFAS-based AFFF was sprayed directly on the ground during fire training at local fire stations and during firefighting training exercises on and near the Airport, as required, allowing PFAS to contaminate groundwater and other adjacent natural resources.

231. Additional releases of AFFF have occurred at specific locations and specific times, through required testing of equipment and other incidental or accidental releases at the Airport, at the Coast Guard Air Station, in fire stations, military sites, and, upon information and belief, manufacturing centers, and related areas.

232. On information and belief, the locations identified in this section as known or likely sources of PFAS contamination, collectively housed thousands of gallons of AFFF concentrate manufactured by Defendants, stored in buckets, drums, tankers, tanks, piping and sprinkler systems. The normal, intended, required, and foreseeable handling and storage of AFFF at these and other sites within and near the Airport resulted in spills and leakage of AFFF.

233. The required use of AFFF for training purposes and for testing equipment at these locations, accidental releases, and potentially for suppressing fires and explosions on the ground as well as coating runways in anticipation of difficult landings, resulted in AFFF being discharged to pavements and soils.

234. On information and belief, PFAS-based AFFF was also used at numerous other

specific locations in and near the Airport at specific times, including at fire stations and training grounds, to suppress fires, and at industrial facilities.

235. During firefighting and firefighting training exercises at or near these and other sites, PFAS-based AFFF was likewise sprayed, according to its intended use, directly on or near the ground and into the air, causing it to be disposed, spilled, and otherwise discharged into the environment.

236. These activities, at the locations identified and others, resulted in discharges or releases of PFAS from Defendants' AFFF products into nearby surface waters, groundwater, soil, and air, including that owned, operated, and/or maintained by the Authority.

237. In short, the normal, intended, required, and foreseeable manner of storage, use, and disposal of Defendants' AFFF products directly resulted in the discharge or release of PFAS into, onto, and near the Authority's environmental and infrastructural resources and properties at specific locations and times, causing injury to the Authority.

238. Upon information and belief, PFAS-based AFFF and/or AFFF component products designed, manufactured, marketed, provided, supplied, sold, and/or distributed by each Defendant were discharged or released into the environment at or from specific locations and at specific times that have injured the Authority's groundwater, stormwater, and soils and; other Authority properties and systems.

239. The instructions, labels and/or material safety data sheets that Defendants provided with their AFFF and/or AFFF component products, if any, during the times relevant to the claims in this Complaint did not fully or sufficiently describe the human and animal health and environmental hazards of PFAS-based AFFF about which Defendants knew or should have known.

240. The instructions, labels and/or material safety data sheets that Defendants provided with their AFFF and/or AFFF component products, if any, during the times relevant to the claims in this Complaint did not provide appropriate warnings and instructions concerning the environmentally safe use and disposal of PFAS-based AFFF that were known or should have been known to Defendants.

241. The instructions, labels and/or material safety data sheets that Defendants provided with their AFFF and/or AFFF component products, if any, during the times relevant to the claims in this Complaint did not provide appropriate instructions regarding how to design a firefighting testing site, or what precautions are necessary to take at such testing sites, in a manner that would potentially eliminate or limit the release of PFAS into the environment, even though the hazards of failing to appropriately contain PFAS were known or should have been known to Defendants.

242. For example, instructions to install a liner under a testing area or outfitting area test-sites with appropriate water filtration systems could have significantly contained the spread of PFAS into the environment. Defendants knew or should have known this, but failed to warn or instruct anyone that their products should only be stored, used, and disposed in conjunction with an effective liner or catch basin, or water filtration system capable of removing PFAS before it could contaminate natural resources and water infrastructure.

243. The instructions, labels and/or material safety data sheets that Defendants provided with their AFFF and/or AFFF component products, if any, during the times relevant to the claims in this Complaint did not provide appropriate warnings of potential pollution of groundwater, surface waters, stormwater, soils or equipment with PFAS nor advised the AFFF user to install appropriate water filtration devices to protect the Authority's resources and properties, even though Defendants knew or should have known about the inevitability of groundwater, surface

waters, stormwater, soils or equipment contamination through the ordinary and intended use of their PFAS-based AFFF products and consequent adverse effects.

244. As a result, PFAS contamination attributable to the use and disposal of Defendants' PFAS-based AFFF products has injured Authority resources and properties, including without limitation groundwater, surface waters, stormwater, soils and equipment. Such PFAS contamination also has impacted the soils and groundwater of surrounding properties.

245. The Authority has already incurred significant costs in connection with, among other things, monitoring and analyzing PFAS contamination in Authority resources and properties, and in the Authority's soils, stormwater, groundwater and other resources.

246. The Authority's obligations under state and federal environmental regulations to identify, monitor, assess, analyze, and prevent, mitigate, remove, or remediate PFAS contamination of its waters, soils, equipment, and other resources and properties are substantial and impose significant and increasing costs on the Authority.

247. In short, the Authority has suffered and will continue to suffer significant injuries as a result of Defendants' conduct.

V. CAUSES OF ACTION

FIRST CAUSE OF ACTION
PUBLIC NUISANCE

248. The Authority realleges and reaffirms each and every allegation set forth in paragraphs 1-247 as if fully restated in this cause of action.

249. Defendants designed, manufactured, distributed, marketed, and promoted PFAS-based AFFF products and/or AFFF component products in a manner that created or contributed to the creation of a public nuisance that is harmful to health and obstructs the free use of the Airport, its soils, groundwater, stormwater, and equipment.

250. Defendants intentionally designed, manufactured, distributed, marketed, and sold PFAS-based AFFF products and/or AFFF component products with the knowledge that they inevitably caused environmental contamination when used as intended.

251. Defendants knew that their PFAS-based AFFF products and/or AFFF component products would end up in the Authority's soils, groundwater, stormwater, equipment, and other public resources, when used as instructed and intended.

252. Defendants' conduct caused and/or contributed to PFAS contamination in the Authority's soils, groundwater, stormwater, equipment, and other public resources, , annoys, injures, and endangers the health, safety, peace, comfort, or convenience of members of the public.

253. Defendants' conduct caused and/or contributed to PFAS contamination in the Authority's soils, groundwater, stormwater, equipment, and other public resources, interferes with and obstructs the public's free use and comfortable enjoyment of the Authority's properties and surrounding properties, for commerce, travel, and aesthetic enjoyment.

254. PFAS contamination in the Authority's soils, groundwater, stormwater, equipment, and other public resources, also interferes with the Authority's interest in a healthy and ecologically sound environment.

255. Defendants' conduct caused and/or contributed to PFAS contamination in the Authority's soils, groundwater, stormwater, equipment, and other public resources, which can be injurious to human, animal, and environmental health.

256. An ordinary person would be reasonably annoyed or disturbed by toxic PFAS that threaten to endanger the health of fish, animals, and humans and degrade water quality and marine habitats.

257. The seriousness of the environmental and human health risk far outweighs any

social utility of Defendants' conduct in designing, manufacturing, marketing, distributing, and selling PFAS-based AFFF products and AFFF component products and concealing the dangers posed to human health and the environment.

258. The rights, interests, and inconvenience to the Authority, and the general public far outweighs the rights, interests, and inconvenience to Defendants, which profited heavily from the manufacture and sale of PFAS-based AFFF products and AFFF component products.

259. Defendants' conduct caused and continues to cause harm to the Authority.

260. The Authority has suffered, and will continue to suffer damage from Defendants' PFAS-based AFFF products and AFFF component products.

261. Defendants knew or, in the exercise of reasonable care, should have known that the design, manufacture, marketing, distribution, and sale of PFAS-based AFFF products and AFFF component products causes the type of contamination now found in the Authority's soils, groundwater, stormwater, equipment, and other public resources.

262. Defendants knew or, in the exercise of reasonable care, should have known that the design, manufacture, marketing, distribution, and sale of PFAS-based AFFF products and AFFF component products would cause continuing, permanent or long-lasting significant PFAS contamination of the Authority's soils, groundwater, stormwater, equipment, and other public resources.

263. Defendants knew that PFAS would contaminate the Authority's soils, groundwater, stormwater, equipment, and other public resources, and would ultimately degrade marine habitats and endanger birds and other animals, as a result of the ordinary and intended use of their products.

264. In addition, Defendants knew that PFAS in AFFF products have been associated with serious illnesses and cancers in humans and that humans may be exposed to PFAS through

ingestion of contaminated water, fish or other foods, and/or dermal contact.

265. Defendants' conduct in designing, manufacturing, distributing, selling and promoting PFAS-based AFFF products and AFFF component products constitutes an unreasonable interference with a right common to the general public, i.e., the right to freely use the Authority's soils, groundwater, stormwater, equipment, and other public resources, without obstruction and health hazard.

266. Defendants are under a continuing duty to act to correct and remediate the injuries their conduct has introduced, and to warn the Authority and the public about the human and environmental risks posed by its PFAS products, and each day on which they fail to do so constitutes a new injury to the Authority.

267. The Authority has suffered and continues to suffer harm of a kind different from that suffered by members of the general public, including harm to unique property and an important Part 139 certificated airport which it operates and/or maintains for the public welfare, such as the costly damage to its Airport, the groundwater underlying the Airport, the Airport's soils, stormwater, equipment that stored, contained, and/or otherwise used AFFF, and other resources.

268. As a direct and proximate result of Defendants' creation of or contribution to a public nuisance, the Authority has suffered, and continues to suffer, monetary damages in an amount to be proven at trial.

269. As a direct and proximate result of Defendants' creation of or contribution to a public nuisance, the Authority has suffered, and will suffer in the future, significant costs to monitor, assess, plan, design and implement abatement measures.

SECOND CAUSE OF ACTION
PRIVATE NUISANCE

270. The Authority realleges and reaffirms each and every allegation set forth in paragraphs 1-269 as if fully restated in this cause of action.

271. The Defendants have interfered with the Authority's property rights, have interfered with the Authority's use, operation and maintenance of the Airport, and Defendants' invasion has caused significant harm.

272. Defendants are the legal cause of the invasion of the Authority's property right, as PFAS contamination of Authority properties was either intentional and unreasonable, or unintentional and otherwise actionable under the rules governing liability for negligent, reckless, or ultrahazardous conduct.

273. Defendants designed, manufactured, distributed, marketed, and promoted PFAS-based AFFF products and/or AFFF component products with the knowledge that they inevitably cause environmental contamination when used as instructed and intended.

274. Defendants knew that their PFAS-based AFFF products and/or AFFF component products would end up in the Authority's soils, groundwater, stormwater, equipment, and other public resources when used as instructed and intended.

275. Defendants' conduct and PFAS contamination in the Authority's soils, groundwater, stormwater, equipment, and other public resources, has caused significant harm to the Authority, including by requiring costly PFAS monitoring and remediation measures.

276. Defendants' conduct substantially and negatively affects the Authority's interest in, and substantially interferes with the Authority's use and quiet enjoyment of, its natural resources, properties, and assets.

277. Defendants' conduct in concealing the dangers that PFAS and AFFF products posed to human health and the environment was not reasonable.

278. Defendants' conduct was not reasonable in designing, manufacturing, distributing, marketing, and promoting PFAS-based AFFF products and/or AFFF component products when they knew of or should have known, that they inevitably caused environmental contamination when used as instructed and intended.

279. Defendants knew or, in the exercise of reasonable care, should have known, that the design, manufacture, marketing, distribution, and sale of PFAS-based AFFF products and AFFF component products causes the type of contamination now found in the Authority's soils, groundwater, stormwater, equipment, and other public resources.

280. Defendants knew or should have known that PFAS would contaminate the Authority's soils, groundwater, stormwater, equipment, and other public resources, and would ultimately degrade marine habitats and endanger birds and animals, as a result of the ordinary and intended use of their products.

281. In addition, Defendants knew or should have known that PFAS and PFAS-based AFFF are associated with serious illnesses and cancers in humans and that humans may be exposed to PFAS through ingestion of contaminated water, fish or other foods, and/or dermal contact.

282. Defendants' conduct in designing, manufacturing, distributing, selling and promoting PFAS-based AFFF products and AFFF component products caused significant damage to the Authority's properties, and constitutes an unreasonable interference with the Authority's right to freely use and enjoy its soils, groundwater, stormwater, equipment, and other public resources, without obstruction and health hazard.

283. Defendants are under a continuing duty to act to correct and remediate the injuries their conduct has introduced, and to warn the Authority and the public about the human and

environmental risks posed by its PFAS products, and each day on which they fail to do so constitutes a new injury to the Authority.

284. As a direct and proximate result of Defendants' creation of a private nuisance, the Authority has suffered, and continues to suffer, monetary damages in an amount to be proven at trial.

THIRD CAUSE OF ACTION
DEFECTIVE DESIGN

285. The Authority realleges and reaffirms each and every allegation set forth in paragraphs 1-284 as if fully restated in this cause of action.

286. Defendants' PFAS-based AFFF products and AFFF component products were not reasonably designed to be safe at the time the products left Defendants' control.

287. The toxicity, solubility, volatility, persistence, bioaccumulative tendency, and inability of PFAS compounds to be contained rendered Defendants' PFAS-based AFFF products and AFFF component products unreasonably dangerous at all times.

288. Defendants' PFAS-based AFFF products and AFFF component products were unsafe as designed.

289. Due to their toxicity, persistence, volatility, solubility, and inability to be contained, among other things, Defendants knew or should have known their PFAS products were not safe at the time they were designed and manufactured because, when used as instructed and intended, such products would inevitably produce significant environmental contamination.

290. Defendants knew or should have known their PFAS-based AFFF products and AFFF component products were unsafe to an extent beyond that which would be contemplated by an ordinary person because of the overwhelming seriousness of creating pervasive

environmental contamination, especially of the Authority's soils, groundwater, stormwater, and equipment.

291. Defendants designed, manufactured, distributed, sold, and promoted PFAS-based AFFF products and AFFF component products in order to maximize their profits despite the known harms.

292. At all times relevant to this action, feasible alternatives to the long-chain PFAS-based AFFF products were available to Defendants, which could have eliminated, reduced, or mitigated the unreasonable dangers and hazards posed by their products as designed.

293. Any utility allegedly provided by the use of long-chain PFAS-based AFFF products and AFFF component products is greatly outweighed by the risks and dangers associated with their use.

294. Defendants failed to exercise reasonable care and were negligent when they failed to adopt and or develop safer designs for firefighting foam products and their components.

295. The PFAS-based AFFF products and AFFF component products were placed in the stream of commerce and sold by Defendants in a defective and unreasonably dangerous condition in that they were toxic, persistent, bioaccumulative, water- and fat-soluble, and volatile (i.e., inevitably escaping their ordinary and intended applications), which resulted in contamination of the Authority's soils, groundwater, stormwater, and equipment, among other PFAS contamination.

296. The PFAS compounds released from Defendants' AFFF products reached the Authority's soils, groundwater, stormwater, and equipment, without any substantial change in condition and were in the same condition at the time of the alleged injuries to the Authority's resources.

297. At the very least, Defendants negligently disregarded that the PFAS would reach the Authority's soils, groundwater, stormwater, and equipment At a minimum, Defendants should reasonably have foreseen that PFAS released from their AFFF products would reach the Authority's resources and properties.

298. In the alternative, at the time of manufacture or distribution, the Defendants had actual knowledge that their AFFF products and AFFF component products were defective and that there was a substantial likelihood that the defect would cause the Authority's injuries, yet the Defendants willfully disregarded that knowledge in the manufacture and/or distribution of their AFFF products and AFFF component products.

299. Contamination of the Authority's soils, groundwater, stormwater, and equipment, occurred because of the defective design and manufacture of the PFAS-based AFFF products and AFFF component products.

300. Defendants' PFAS-based AFFF products and AFFF component products caused and continue to cause injury to the Authority.

301. Defendants are under a continuing duty to act to correct and remediate the injuries their conduct has introduced, and to warn the Authority and the public about the human and environmental risks posed by its PFAS products, and each day on which they fail to do so constitutes a new injury to the Authority.

302. The Authority has suffered and will continue to suffer damages in an amount to be proven at trial.

FOURTH CAUSE OF ACTION
FAILURE TO WARN

303. The Authority realleges and reaffirms each and every allegation set forth in paragraphs 1-302 as if fully restated in this count.

304. Defendants' PFAS-based AFFF products and AFFF component products were not reasonably safe because they lacked adequate warnings at the time the products left Defendants' control.

305. At the time Defendants designed, manufactured, distributed, sold, and promoted their PFAS-based AFFF products and AFFF component products, Defendants knew based on their own scientific studies, and based on other scientific, technical, or medical information reasonably available at the time, that, even when used as instructed and intended, such products would inevitably produce significant environmental contamination.

306. Despite Defendants' knowledge, Defendants failed to provide adequate warnings that their PFAS-based AFFF products and AFFF component products would become a pervasive contaminant and contaminate the Authority's soils, groundwater, stormwater, equipment and other resources, among other contamination.

307. Defendants could have warned of this certainty but negligently failed to disclose the certainty of contamination in order to maximize their profits.

308. In the alternative, Defendants could have warned of this certainty but intentionally concealed the certainty of contamination in order to maximize their profits.

309. Defendants concealed the dangers of PFAS and PFAS-based products after they designed, manufactured, distributed, promoted, and sold them, and did not issue adequate warnings or instructions to those who had previously purchased their products, and thereafter continued to design, manufacture, distribute, promote and sell PFAS-based products without adequate warnings or instructions.

310. Without adequate warnings or instructions, Defendants' PFAS-based AFFF products and AFFF component products were unsafe to an extent beyond that which would be

contemplated by an ordinary person.

311. Defendants could have warned and instructed the users of their AFFF products on precautionary measures to be taken to prevent or minimize environmental contamination, such as advising that the products must not be used without an effective liner or catch basin or water filtration system capable of removing PFAS but failed to do so.

312. Defendants knowingly failed to issue warnings or instructions concerning the dangers of PFAS and their PFAS-based products in the manner that a reasonably prudent manufacturer would act in the same or similar circumstances.

313. The PFAS-based AFFF products and AFFF component products were placed in the stream of commerce and sold by Defendants in a defective and unreasonably dangerous condition in that their design failed to include adequate warnings or instructions sufficient and necessary for the safe and proper use and disposal of the products.

314. The PFAS compounds released from Defendants' AFFF products reached the Authority's soils, groundwater, stormwater, equipment and other public resources, without any substantial change in condition and were in the same condition at the time of the alleged injury to the Authority's soils, groundwater, stormwater, equipment and other properties.

315. Defendants recklessly disregarded that the PFAS would reach the Authority's soils, groundwater, stormwater, equipment and other properties. At a minimum, Defendants should reasonably have foreseen that PFAS released from their AFFF products would reach the Authority's resources and properties.

316. Contamination of the Authority's soils, groundwater, stormwater, equipment and other properties, occurred because of the defective PFAS-based AFFF products and AFFF component products, in that to be non-defective and reasonably safe for use, the products should

have contained or been accompanied by an adequate warning as to their toxicity, persistence, bioaccumulativity, and volatility, among other topics.

317. Further, such contamination occurred because of Defendants' failure to adequately warn or instruct its customers as to proper disposal techniques and safeguards necessary to prevent environmental contamination resulting from the ordinary and intended use of such products.

318. Defendants' PFAS-based AFFF products and AFFF component products caused and continue to cause injury to the Authority.

319. Defendants are under a continuing duty to act to correct and remediate the injuries their conduct has introduced, and to warn the Authority and the public about the human and environmental risks posed by its products, and each day on which they fail to do so constitutes a new injury to the Authority.

320. The Authority has suffered and will continue to suffer damages in an amount to be proven at trial.

FIFTH CAUSE OF ACTION
TRESPASS

321. The Authority realleges and reaffirms each and every allegation set forth in paragraphs 1-320 as if fully restated in this count.

322. As alleged above, Defendants designed, manufactured, distributed, marketed, and promoted PFAS-based AFFF products and AFFF component products in a manner that ensured that PFAS compounds would invade the Authority's soils, groundwater, stormwater, equipment and other properties.

323. As a result of such invasion, the Authority's soils, groundwater, stormwater, equipment and other properties, which the Authority operates and maintains for the public welfare, each suffer contamination with toxic PFAS.

324. Such contamination is harmful to public health and obstructs the free use of the Authority's soils, groundwater, stormwater, equipment and other properties.

325. Defendants intentionally designed, manufactured, marketed, and sold PFAS-based AFFF products and AFFF component products with the knowledge that they would inevitably cause pervasive environmental contamination in Authority's soils, groundwater, stormwater, equipment and other properties.

326. Defendants knew or should have known that PFAS would likely end up in the Authority's soils, groundwater, stormwater, equipment and other properties, as well as in other water bodies, sediments, fish and animal tissues, when AFFF products were used as instructed and intended.

327. The Authority did not consent to Defendants' intrusion into and contamination with PFAS of its soils, groundwater, stormwater, equipment and other properties.

328. The trespass of PFAS has not ceased. As long as the Authority's property remains contaminated due to Defendants' conduct, the trespass continues and is ongoing.

329. Defendants' conduct caused and will continue to cause injury to the Authority.

330. Defendants are under a continuing duty to act to correct and remediate the injuries their conduct has introduced, and to warn the Authority and the public about the human and environmental risks posed by its products, and each day on which they fail to do so constitutes a new injury to the Authority.

331. As a direct and proximate result of Defendants' trespass, the Authority has suffered, and continues to suffer, monetary damages in an amount to be proven at trial.

SIXTH CAUSE OF ACTION
NEGLIGENCE

332. The Authority realleges and reaffirms each and every allegation set forth in

paragraphs 1-331 as if fully restated in this count.

333. Defendants had a duty of care to protect others against unreasonable risks resulting from the use or disposal of their PFAS-based AFFF products and AFFF component products.

334. Defendants breached their duty by failing to conform to the requisite standard of care when they negligently, carelessly, and recklessly designed, manufactured, formulated, handled, stored, labeled, instructed, controlled (or failed to control), tested (or failed to test), marketed, sold and otherwise distributed toxic PFAS-based products that contaminated the Authority's soils, groundwater, stormwater, equipment and other properties.

335. Defendants failed to exercise ordinary care because a reasonably careful company that learned of its product's toxicity would alter the product's design to eliminate or reduce the hazards or would warn of its toxic properties.

336. Defendants failed to exercise ordinary care because a reasonably careful company that learned that its product could not be contained during normal production and use would alter the product's design to eliminate or reduce the hazards or would warn of its dangers.

337. Defendants failed to exercise ordinary care because a reasonably careful company would not continue to manufacture PFAS-based products in mass quantities and to the extent that Defendants manufactured them.

338. As a direct and proximate result of Defendants' acts and omissions, the Authority's soils, groundwater, stormwater, equipment and other properties, are contaminated with Defendants' PFAS.

339. Defendants' negligence caused and continues to cause injury to the Authority.

340. Defendants are under a continuing duty to act to correct and remediate the injuries their conduct has introduced, and to warn the Authority and the public about the human and

environmental risks posed by their products, and each day on which they fail to do so constitutes a new injury to the Authority.

341. The Authority has suffered and will continue to suffer damages in an amount to be proven at trial.

SEVENTH CAUSE OF ACTION
MICHIGAN NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT
MCL. § 324.1701

342. The Authority realleges and reaffirms each and every allegation set forth in paragraphs 1-341 as if fully restated in this count.

343. Defendants have caused the pollution, impairment, or destruction or they are likely to cause the pollution, impairment, or destruction, of the soils, groundwater, stormwater, surface water, or other natural resources at the Airport.

344. Defendants knew or should have known for many years that PFAS-laden AFFF would pollute, impair or destroy, and yet they suppressed the science, and failed to warn the public and regulators, as well as those purchasing and using AFFF products. Instead Defendants engaged in disinformation campaigns issuing assurances that PFAS were safe, and continuing to instruct that AFFF be sprayed into the air and onto the ground.

345. There were feasible and prudent alternatives to Defendants' conduct that would have been consistent with the promotion of the public health, safety, and welfare.

346. The intended and ordinary use of AFFF products is to spray them into the air and onto the ground, whether in training exercises, equipment calibration or in responding to difficult landings and fire events. Environmental contamination is the inevitable result of this intended and ordinary use, absent the taking of specific precautionary measures to guard against the uncontrolled release of PFAS.

347. Defendants knew that these dangerous chemicals would be released into the environment during the ordinary and intended use of their AFFF products, causing harm to groundwater underlying the Airport, its soils, stormwater and other Authority properties, among other damage to resources.

348. Defendants could have warned and instructed the users of their AFFF products on precautionary measures to be taken to prevent or minimize environmental contamination, such as advising that the products must not be used without an effective liner or catch basin or water filtration system capable of removing PFAS.

349. Similarly, Defendants could have warned and instructed regulators and the public about the potential hazards of the ordinary and intended use of their AFFF products, and the need to take steps to prevent extensive environmental contamination as a result thereof. Instead, Defendants concealed their knowledge of such hazards in order to continue selling their products and protect their profits.

350. In addition to providing adequate warnings or instructions, Defendants could have elected to make different product design decisions in the formulation of their AFFF products. For example, Defendants could have utilized PFAS compounds that are less toxic and less persistent than PFOA/PFOS, and could have utilized entirely non-fluorinated alternative formulations.

351. Indeed, once regulators began to scrutinize PFOA and PFOS, Defendants began to revise their product formulations to reduce or remove PFOA and PFOS, replacing them with different PFAS compounds that Defendants claim are less toxic, less persistent, and less bioaccumulative than PFOA and PFOS. Defendants could have made these changes much earlier than they did.

352. PFAS-free alternatives to Defendants' AFFF products are available. Certain

manufacturers, such as National Foam, now market fluorine free foam (F3) products that they maintain are free of intentionally added PFAS. And certain Defendants, like 3M, began conducting research on such non-fluorinated alternatives decades ago, but terminated these efforts because the resulting products would not be as profitable.

353. Defendants are under a continuing duty to act to correct and remediate the injuries their conduct has introduced, and to warn the Authority, and the public about the human and environmental risks posed by their products, and each day on which they fail to do so constitutes a new injury to the Authority.

354. The Authority has incurred and will continue to incur substantial costs to abate Defendants' pollution, impairment and destruction of the Airport properties.

VI. PRAYER FOR RELIEF

The Authority prays for judgment against Defendants as follows:

1. Damages according to proof;

2. Award of the past, present, and future costs to abate the ongoing public nuisance and/or to investigate, assess, analyze, monitor, remediate, and otherwise respond to the contamination, and to restore or replace environmental resources injured or impaired as a result of Defendants' conduct;

3. Declaratory judgment and injunctive relief requiring Defendants to abate and/or pay for abatement of the ongoing public nuisance, including all future abatement techniques necessary to protect the public health and the integrity and quality of public resources at the Airport or other natural resources impacted by AFFF discharges at the Airport;

4. Declaratory judgment and injunctive relief requiring Defendants to abate and/or pay for abatement of the ongoing pollution, impairment or destruction of equipment, groundwater, stormwater, surface water, soils, and other natural resources, including all future abatement

techniques necessary to protect the public health and the integrity and quality of public resources at the Airport or other natural resources impacted by AFFF discharges at the Airport;

5. Litigation costs and attorney's fees as permitted by law;

6. Pre-judgment and post-judgment interest; and

7. Any other and further relief as the Court deems just, proper, and equitable.

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DEMAND FOR JURY TRIAL

The Authority demands a jury trial on all issues and claims triable by jury.

Respectfully submitted,

GRANT & EISENHOFER P.A.

Dated: March 18, 2025

/s/ Kyle J. McGee

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